WEST Search History

DATE: Monday, August 18, 2003

Set Name side by side	Query	Hit Count	Set Name result set
DB=USPT; PLUR=YES; OP=AND			
L1	igy.clm. and campylobact$.clm.	0	L1
L2	ig-y.clm. and campylobact$.clm.	0	L2
L3	campylobact$.clm. or jejuni.clm.	191	L3
L4	L3 same (avian or turkey or fowl or poultry or chick or chicken or bird)	7	L4
L5	anticampylobacter.clm. or anti-campylobacter.clm.	0	L5
L6	anti-Campylobacter.clm.	3	L6
L7	(campylobacter or jejuni) same (igy or igg or igm or iga or antisera or antiserum or anti-sera or anti-serum or immune or immunoglobulin or monoclonal or polyclonal or poly-clonal or mono-clonal)	123	L7
L8	L7 same (avian or turkey or fowl or poultry or chick or chicken or bird)	16	L8
L9	campylobact$.clm. or jejuni.clm.	191	L9
L10	L9 and (flge or flg-e or hook).clm.	0	L10
L11	(campylobact$ or jejuni).ti,ab. and hook.clm.	0	L11
L12	(campylobact$ or jejuni).ti,ab. and flgE.clm.	0	L12
L13	(campylobact$ or jejuni) and flgE	2	L13

END OF SEARCH HISTORY

```
S4          1   (S1 OR S2 OR S3) AND (AVIAN (5N) (ANTIBOD? OR ANTISER? OR -
              IMMUNE? OR SEROTYP? OR IMMUNE? OR IMMUNOGLOB? OR IGA OR IGM OR
              IGG?))
S5      12196   (AVIAN OR CHICK? OR FOWL? OR TURKEY? OR BIRD? OR IGY?) (5N)
              (ANTIBOD? OR ANTISER? OR IMMUNE? OR SEROTYP? OR IMMUNE? OR I-
              MMUNOGLOB? OR IGA OR IGM OR IGG?)
S6          45   (S1 OR S2 OR S3) AND S5
S7          44   S6 NOT S4
S8           6   S7/2000:2003
S9          38   S7 NOT S8
?s (s1 or s2 or s3)
            8257  S1
            4441  S2
             779  S3
     S10    8313  (S1 OR S2 OR S3)
?s s10 and (western? or immunoblot? or blot?)
            8313  S10
          124711  WESTERN?
           53434  IMMUNOBLOT?
          170904  BLOT?
     S11     375  S10 AND (WESTERN? OR IMMUNOBLOT? OR BLOT?)
?s s11 and (kda or kd or dalton? or kilodalton? or rmw or weight?)
             375  S11
           90595  KDA
           44622  KD
           12846  DALTON?
            6642  KILODALTON?
              24  RMW
          550619  WEIGHT?
     S12     140  S11 AND (KDA OR KD OR DALTON? OR KILODALTON? OR RMW OR
                  WEIGHT?)
?s s12 and (ANTIBOD? OR ANTISER? OR -
>>>Unmatched parentheses
?             IMMUNE? OR SEROTYP? OR IMMUNE? OR IMMUNOGLOB? OR IGA OR IGM OR
>>>Unrecognizable Command
?              IGG?))
>>>Unrecognizable Command
? s s12 and (ANTIBOD? OR ANTISER? OR igg or iga or igm or MMUNE? OR SEROTYP? OR IMMUNE? O
R IMMUNOGLOB?)
             140  S12
          625653  ANTIBOD?
           53949  ANTISER?
           76481  IGG
           29714  IGA
           39527  IGM
               1  MMUNE?
           31174  SEROTYP?
          237721  IMMUNE?
          205575  IMMUNOGLOB?
     S13     110  S12 AND (ANTIBOD? OR ANTISER? OR IGG OR IGA OR IGM OR
                  MMUNE? OR SEROTYP? OR IMMUNE? OR IMMUNOGLOB?)
?s s13 and (avian? or fowl? or poultry? or turkey? or chick? or hen? or yolk? or igy or b
ird?)
             110  S13
           26408  AVIAN?
            5994  FOWL?
           21203  POULTRY?
           15337  TURKEY?
          127853  CHICK?
           72384  HEN?
           10851  YOLK?
             250  IGY
           34792  BIRD?
     S14       9  S13 AND (AVIAN? OR FOWL? OR POULTRY? OR TURKEY? OR CHICK?
                  OR HEN? OR YOLK? OR IGY OR BIRD?)
?t s14/9/all
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Dr Blog 8/03 PDF

WEST

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L4: Entry 5 of 7 File: USPT Apr 12, 1994

DOCUMENT-IDENTIFIER: US 5302388 A
TITLE: Control of campylobacter jejuni colonization

CLAIMS:

1. An anti-Campylobacter jejuni colonizing poultry feed which is useful for preventing the colonization of Campylobacter jejuni in a poultry animal, having dispersed therein, as an active ingredient, an effective amount of at least one cecal-colonizing strain of microorganism to provide anti-Campylobacter activity, wherein the strain is selected from the group consisting of Klebsiella pneumoniae strain 23 (ATCC No. 55234), Citrobacter diversus strain 22 (ATCC No. 55236), Escherichia coli (013:H.sup.-) strain 25 (ATCC No. 55235), mutants thereof which retain the ability to produce anti-Campylobacter activity, and mixtures thereof.

7. The composition of claim 5, wherein the cecal-colonizing strain is an active ingredient in a poultry feed material, said strain producing anti-Campylobacter metabolites to provide, upon addition to a poultry feed, a poultry feed producing an effective amount of anti-Campylobacter metabolites to inhibit the colonization of Campylobacter jejuni in a poultry animal.

11. A process for inhibiting the colonization of Campylobacter jejuni in poultry comprising administering an effective amount of at least one cecal-colonizing strain of microorganism, said strain producing anti-Campylobacter metabolites, wherein the strain is selected from the group consisting of Klebsiella pneumoniae strain 23 (ATCC No. 55234), Citrobacter diversus strain 22 (ATCC No. 55236), Escherichia coli (013:H.sup.-) strain 25 (ATCC No. 55235), mutants thereof which retain the ability to produce anti-Campylobacter activity, and mixtures thereof, and a carrier.

20. A process for inhibiting the colonization of Campylobacter jejuni in poultry comprising dispensing and delivering a dietary supplement comprising an effective amount of at least one cecal-colonizing strain of microorganism, said strain producing anti-Campylobacter metabolites, wherein the strain is selected from the group consisting of Klebsiella pneumoniae strain 23 (ATCC No. 55234), Citrobacter diversus strain 22 (ATCC No. 55236), Escherichia coli (013:H.sup.-) strain 25 (ATCC No. 55235), mutants thereof which retain the ability to produce anti-Campylobacter activity, and mixtures thereof.

WEST

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L8: Entry 10 of 16 File: USPT Mar 30, 1999

DOCUMENT-IDENTIFIER: US 5888810 A
TITLE: Campylobacteri jejuni flagellin-escherichia coli LT-B fusion protein

Brief Summary Text (33):
Serum antibody response to invasive enteric pathogens is very important in protection against systemic infections. The initial immunologic response to enteric infection occurs at the level of the intestinal mucosa. Secretory immunoglobulin A (sIgA) response at the intestinal mucosa is a primary defense against enteric infections (Winsor et al. supra). Stern et al. (1990. Avian Dis., vol. 34, pp. 595-601) found that specific anti-C. jejuni antibodies diminish the ability of the bacterium to colonize the gut of 1-day-old chicks when incubated with the organism as compared with preincubation with phosphate buffered saline.

Brief Summary Text (34):
The flagella of C. jejuni are essential in the colonization of the intestine. Nonflagellated organisms are quickly cleared from the intestine. Chicken polyclonal antiflagellin antibodies as well as monoclonal antiflagellin antibodies have been found to prevent C. jejuni from colonizing the chickens or to increase the dose of bacteria required to colonize the chickens (Carr, unpublished). Flagellar antigens are therefore potential candidates for vaccines as well as suitable antigens for diagnostic purposes, since the flagellin protein is immunodominant during human infections.

Detailed Description Text (9):
The LT-B/fla fusion gene was under constitutive expression in X6097. The fusion protein was detected at several growth times. The best recovery, i.e. the greatest yield of the fusion protein relative to the total protein, was when cell density corresponding to OD.sub.600 of about 0.8 was reached. The fusion protein was detected by Coomassie staining, and Western blot analyses using chicken anti-flagellin serum (FIG. 2), rabbit anti-C. jejuni serum, affinity purified rabbit anti-C. jejuni flagellin antibodies and rabbit anti-LT serum (FIG. 2). The fusion protein was not recognized by a monoclonal antibody directed against the 63 kd flagellin protein, presumably because the monoclonal antibody is directed against an epitope not present in our fusion protein since only 46% of the flaA gene is expressed. The fusion protein has a MW of 43 kd (16 for LT-B and 27 kd for the U band). The protein could not be detected from the pBEB transformed X6097 control. The LT-B/fla, fusin gene DNA sequence is presented in FIG. 3.

Detailed Description Text (28):
Western blot analyses were performed as described by Towbin et al (1979. PNAS, vol. 76, pp. 4350-4354). Blots were treated with a 1:200 dilution of chicken anti-C. jejuni serum or rabbit anti-LT before adding the secondary antibody (goat-anti rabbit IgG alkaline phosphatase conjugate, Bio-Rad), and developed with the substrate solution (5-bromo-4-chloro-3-indolyl phosphate/nitro blue tetrazolium) as described by Sambrook et al. (1989. In Molecular Cloning, A Laboratory Manual, Cold Spring Harbor, N.Y.: Cold Spring Harbor

Laboratory). Results are shown in FIG. 2.

S3 295 S2/2000:2003
S4 78 S2 NOT S3
?t s4/3,kwic/42

4/3,KWIC/42 (Item 17 from file: 349)
DIALOG(R)File 349:PCT FULLTEXT
(c) 2003 WIPO/Univentio. All rts. reserv.

00452378 **Image available**
A PORIN GENE FROM CAMPYLOBACTER **JEJUNI, RELATED PRODUCTS AND USES THEREOF**
GENE DE PORINE EXTRAIT DE CAMPYLOBACTER **JEJUNI, PRODUITS APPARENTES ET LEURS UTILISATIONS**
Patent Applicant/Assignee:
HER MAJESTY IN RIGHT OF CANADA as represented by THE MINISTER OF HEALTH AND WELFARE CANADA,
JOHNSON Wendy M,
BACON David J,
RODGERS Frank,
BOLLA Jean-Michel,
Inventor(s):
JOHNSON Wendy M,
BACON David J,
RODGERS Frank,
BOLLA Jean-Michel,
Patent and Priority Information (Country, Number, Date):
Patent: WO 9842842 A1 19981001
Application: WO 98CA272 19980325 (PCT/WO CA9800272)
Priority Application: US 9741200 19970325
Designated States: AL AM AT AU AZ BA BB BG BR BY CA CH CN CU CZ DE DK EE ES FI GB GE GH GM GW HU ID IL IS JP KE KG KP KR KZ LC LK LR LS LT LU LV MD MG MK MN MW MX NO NZ PL PT RO RU SD SE SG SI SK SL TJ TM TR TT UA UG US UZ VN YU ZW GH GM KE LS MW SD SZ UG ZW AM AZ BY KG KZ MD RU TJ TM AT BE CH DE DK ES FI FR GB GR IE IT LU MC NL PT SE BF BJ CF CG CI CM GA GN ML MR NE SN TD TG
Publication Language: English
Fulltext Word Count: 25116

A PORIN GENE FROM CAMPYLOBACTER **JEJUNI, RELATED PRODUCTS AND USES THEREOF**
GENE DE PORINE EXTRAIT DE CAMPYLOBACTER **JEJUNI, PRODUITS APPARENTES ET LEURS UTILISATIONS**
Fulltext Availability:
Detailed Description
Claims

English Abstract
The invention relates to a porin gene from **Campylobacter** jejuni [SEQ ID NO:3]. The gene has been designated porA and is 1275 bp...

French Abstract
L'invention concerne un gene de porine extrait de **Campylobacter** jejuni (SEQ ID NO:3). Ce gene, denomme porA, a une longueur de 1275 bp...

Detailed Description
A PORIN GENE FROM **Campylobacter** jejuni,
RELATED PRODUCTS AND USES THEREOF
TECHNICAL FIELD
This invention relates to a porin gene from
5 **Campylobacter** jejuni, to related products and to the uses
BACKGROUND ART
In the following discussion, the...

...41). Active surveys
conducted in the United States have estimated the number
of cases of **campylobacteriosis** to be 2.5 million per year,
making it a multi-million dollar disease (39...

...by C. jejuni can range from watery to bloody
diarrhea (28, 39). In most cases **campylobacteriosis** is a
self-limiting disease but in the more severe cases,

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File 155:MEDLINE(R)  1966-2003/Aug W3
       (c) format only 2003 The Dialog Corp.
*File 155: Medline has been reloaded and accession numbers have
changed.  Please see HELP NEWS 155.

      Set  Items  Description
      ---  -----  -----------
?e campylobacter

Ref    Items    RT  Index-term
E1         1        CAMPYLOBACHTER
E2         1        CAMPYLOBACTE
E3      8257     9 *CAMPYLOBACTER
E4        54        CAMPYLOBACTER --ANALYSIS --AN
E5        21        CAMPYLOBACTER --CHEMISTRY --CH
E6       529        CAMPYLOBACTER --CLASSIFICATION --CL
E7        15        CAMPYLOBACTER --CYTOLOGY --CY
E8       398        CAMPYLOBACTER --DRUG EFFECTS --DE
E9       125        CAMPYLOBACTER --ENZYMOLOGY --EN
E10      317        CAMPYLOBACTER --GENETICS --GE
E11      270        CAMPYLOBACTER --GROWTH AND DEVELOPMENT --GD
E12      295        CAMPYLOBACTER --IMMUNOLOGY --IM

          Enter P or PAGE for more
?
?p

Ref    Items    RT  Index-term
E13     1652        CAMPYLOBACTER --ISOLATION AND PURIFICATION --I
E14      130        CAMPYLOBACTER --METABOLISM --ME
E15      240        CAMPYLOBACTER --PATHOGENICITY --PY
E16       95        CAMPYLOBACTER --PHYSIOLOGY --PH
E17        6        CAMPYLOBACTER --RADIATION EFFECTS --RE
E18       79        CAMPYLOBACTER --ULTRASTRUCTURE --UL
E19      320     4  CAMPYLOBACTER COLI
E20       15        CAMPYLOBACTER COLI --CHEMISTRY --CH
E21       90        CAMPYLOBACTER COLI --CLASSIFICATION --CL
E22       57        CAMPYLOBACTER COLI --DRUG EFFECTS --DE
E23       12        CAMPYLOBACTER COLI --ENZYMOLOGY --EN
E24      126        CAMPYLOBACTER COLI --GENETICS --GE

          Enter P or PAGE for more
?p

Ref    Items    RT  Index-term
E25       32        CAMPYLOBACTER COLI --GROWTH AND DEVELOPMENT --
E26       24        CAMPYLOBACTER COLI --IMMUNOLOGY --IM
E27      148        CAMPYLOBACTER COLI --ISOLATION AND PURIFICATIO
E28       17        CAMPYLOBACTER COLI --METABOLISM --ME
E29       24        CAMPYLOBACTER COLI --PATHOGENICITY --PY
E30       16        CAMPYLOBACTER COLI --PHYSIOLOGY --PH
E31        8        CAMPYLOBACTER COLI --ULTRASTRUCTURE --UL
E32     1772     5  CAMPYLOBACTER FETUS
E33       35        CAMPYLOBACTER FETUS --ANALYSIS --AN
E34       14        CAMPYLOBACTER FETUS --CHEMISTRY --CH
E35      192        CAMPYLOBACTER FETUS --CLASSIFICATION --CL
E36       14        CAMPYLOBACTER FETUS --CYTOLOGY --CY

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?p

Ref    Items    RT  Index-term
E37      180        CAMPYLOBACTER FETUS --DRUG EFFECTS --DE
E38       12        CAMPYLOBACTER FETUS --ENZYMOLOGY --EN
E39      105        CAMPYLOBACTER FETUS --GENETICS --GE
E40      157        CAMPYLOBACTER FETUS --GROWTH AND DEVELOPMENT -
E41      241        CAMPYLOBACTER FETUS --IMMUNOLOGY --IM
E42      781        CAMPYLOBACTER FETUS --ISOLATION AND PURIFICATI
E43       80        CAMPYLOBACTER FETUS --METABOLISM --ME
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E44      108        CAMPYLOBACTER FETUS --PATHOGENICITY --PY
E45       44        CAMPYLOBACTER FETUS --PHYSIOLOGY --PH
E46        2        CAMPYLOBACTER FETUS --RADIATION EFFECTS --RE
E47       43        CAMPYLOBACTER FETUS --ULTRASTRUCTURE --UL
E48     3925     2  CAMPYLOBACTER INFECTIONS

          Enter P or PAGE for more
?p

Ref    Items  Index-term
E49       42  CAMPYLOBACTER INFECTIONS --BLOOD --BL
E50        5  CAMPYLOBACTER INFECTIONS --CEREBROSPINAL FLUID
?s e3-e50
             8257  CAMPYLOBACTER
               54  CAMPYLOBACTER --ANALYSIS --AN
               21  CAMPYLOBACTER --CHEMISTRY --CH
              529  CAMPYLOBACTER --CLASSIFICATION --CL
               15  CAMPYLOBACTER --CYTOLOGY --CY
              398  CAMPYLOBACTER --DRUG EFFECTS --DE
              125  CAMPYLOBACTER --ENZYMOLOGY --EN
              317  CAMPYLOBACTER --GENETICS --GE
              270  CAMPYLOBACTER --GROWTH AND DEVELOPMENT --GD
              295  CAMPYLOBACTER --IMMUNOLOGY --IM
             1652  CAMPYLOBACTER --ISOLATION AND PURIFICATION --I
              130  CAMPYLOBACTER --METABOLISM --ME
              240  CAMPYLOBACTER --PATHOGENICITY --PY
               95  CAMPYLOBACTER --PHYSIOLOGY --PH
                6  CAMPYLOBACTER --RADIATION EFFECTS --RE
               79  CAMPYLOBACTER --ULTRASTRUCTURE --UL
              320  CAMPYLOBACTER COLI
               15  CAMPYLOBACTER COLI --CHEMISTRY --CH
               90  CAMPYLOBACTER COLI --CLASSIFICATION --CL
               57  CAMPYLOBACTER COLI --DRUG EFFECTS --DE
               12  CAMPYLOBACTER COLI --ENZYMOLOGY --EN
              126  CAMPYLOBACTER COLI --GENETICS --GE
               32  CAMPYLOBACTER COLI --GROWTH AND DEVELOPMENT --
               24  CAMPYLOBACTER COLI --IMMUNOLOGY --IM
              148  CAMPYLOBACTER COLI --ISOLATION AND PURIFICATIO
               17  CAMPYLOBACTER COLI --METABOLISM --ME
               24  CAMPYLOBACTER COLI --PATHOGENICITY --PY
               16  CAMPYLOBACTER COLI --PHYSIOLOGY --PH
                8  CAMPYLOBACTER COLI --ULTRASTRUCTURE --UL
             1772  CAMPYLOBACTER FETUS
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              192  CAMPYLOBACTER FETUS --CLASSIFICATION --CL
               14  CAMPYLOBACTER FETUS --CYTOLOGY --CY
              180  CAMPYLOBACTER FETUS --DRUG EFFECTS --DE
               12  CAMPYLOBACTER FETUS --ENZYMOLOGY --EN
              105  CAMPYLOBACTER FETUS --GENETICS --GE
              157  CAMPYLOBACTER FETUS --GROWTH AND DEVELOPMENT -
              241  CAMPYLOBACTER FETUS --IMMUNOLOGY --IM
              781  CAMPYLOBACTER FETUS --ISOLATION AND PURIFICATI
               80  CAMPYLOBACTER FETUS --METABOLISM --ME
              108  CAMPYLOBACTER FETUS --PATHOGENICITY --PY
               44  CAMPYLOBACTER FETUS --PHYSIOLOGY --PH
                2  CAMPYLOBACTER FETUS --RADIATION EFFECTS --RE
               43  CAMPYLOBACTER FETUS --ULTRASTRUCTURE --UL
             3925  CAMPYLOBACTER INFECTIONS
               42  CAMPYLOBACTER INFECTIONS --BLOOD --BL
                5  CAMPYLOBACTER INFECTIONS --CEREBROSPINAL FLUID
      S1     8257  E3-E50
?p

Ref    Items  Index-term
E1         5  CAMPYLOBACTER INFECTIONS --CEREBROSPINAL FLUID
E2         4  CAMPYLOBACTER INFECTIONS --CHEMICALLY INDUCED
E3         7  CAMPYLOBACTER INFECTIONS --CLASSIFICATION --CL
E4       713  CAMPYLOBACTER INFECTIONS --COMPLICATIONS --CO
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E5          3  CAMPYLOBACTER INFECTIONS --CONGENITAL --CN
E6        614  CAMPYLOBACTER INFECTIONS --DIAGNOSIS --DI
E7          2  CAMPYLOBACTER INFECTIONS --DIET THERAPY --DH
E8        477  CAMPYLOBACTER INFECTIONS --DRUG THERAPY --DT
E9         11  CAMPYLOBACTER INFECTIONS --ECONOMICS --EC
E10         3  CAMPYLOBACTER INFECTIONS --ENZYMOLOGY --EN
E11       906  CAMPYLOBACTER INFECTIONS --EPIDEMIOLOGY --EP
E12         3  CAMPYLOBACTER INFECTIONS --ETHNOLOGY --EH

          Enter P or PAGE for more
?p

Ref    Items  Index-term
E13      268  CAMPYLOBACTER INFECTIONS --ETIOLOGY --ET
E14       23  CAMPYLOBACTER INFECTIONS --GENETICS --GE
E15        6  CAMPYLOBACTER INFECTIONS --HISTORY --HI
E16      335  CAMPYLOBACTER INFECTIONS --IMMUNOLOGY --IM
E17       27  CAMPYLOBACTER INFECTIONS --METABOLISM --ME
E18     1281  CAMPYLOBACTER INFECTIONS --MICROBIOLOGY --MI
E19       13  CAMPYLOBACTER INFECTIONS --MORTALITY --MO
E20        2  CAMPYLOBACTER INFECTIONS --NURSING --NU
E21      249  CAMPYLOBACTER INFECTIONS --PATHOLOGY --PA
E22       78  CAMPYLOBACTER INFECTIONS --PHYSIOPATHOLOGY --P
E23      140  CAMPYLOBACTER INFECTIONS --PREVENTION AND CONT
E24        4  CAMPYLOBACTER INFECTIONS --PSYCHOLOGY --PX

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?p

Ref    Items   RT  Index-term
E25       10       CAMPYLOBACTER INFECTIONS --RADIOGRAPHY --RA
E26       11       CAMPYLOBACTER INFECTIONS --SURGERY --SU
E27       61       CAMPYLOBACTER INFECTIONS --THERAPY --TH
E28      299       CAMPYLOBACTER INFECTIONS --TRANSMISSION --TM
E29        3       CAMPYLOBACTER INFECTIONS --ULTRASONOGRAPHY --U
E30        1       CAMPYLOBACTER INFECTIONS --URINE --UR
E31      578       CAMPYLOBACTER INFECTIONS --VETERINARY --VE
E32     1577    4  CAMPYLOBACTER JEJUNI
E33        2       CAMPYLOBACTER JEJUNI --ANALYSIS --AN
E34       67       CAMPYLOBACTER JEJUNI --CHEMISTRY --CH
E35      259       CAMPYLOBACTER JEJUNI --CLASSIFICATION --CL
E36       12       CAMPYLOBACTER JEJUNI --CYTOLOGY --CY

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Ref    Items   RT  Index-term
E37      190       CAMPYLOBACTER JEJUNI --DRUG EFFECTS --DE
E38       39       CAMPYLOBACTER JEJUNI --ENZYMOLOGY --EN
E39      425       CAMPYLOBACTER JEJUNI --GENETICS --GE
E40      155       CAMPYLOBACTER JEJUNI --GROWTH AND DEVELOPMENT
E41      243       CAMPYLOBACTER JEJUNI --IMMUNOLOGY --IM
E42      553       CAMPYLOBACTER JEJUNI --ISOLATION AND PURIFICAT
E43       81       CAMPYLOBACTER JEJUNI --METABOLISM --ME
E44      179       CAMPYLOBACTER JEJUNI --PATHOGENICITY --PY
E45       80       CAMPYLOBACTER JEJUNI --PHYSIOLOGY --PH
E46        1       CAMPYLOBACTER JEJUNI --RADIATION EFFECTS --RE
E47       36       CAMPYLOBACTER JEJUNI --ULTRASTRUCTURE --UL
E48        0    1  CAMPYLOBACTER PYLORI

          Enter P or PAGE for more
?s e1-e47
             5  CAMPYLOBACTER INFECTIONS --CEREBROSPINAL FLUID
             4  CAMPYLOBACTER INFECTIONS --CHEMICALLY INDUCED
             7  CAMPYLOBACTER INFECTIONS --CLASSIFICATION --CL
           713  CAMPYLOBACTER INFECTIONS --COMPLICATIONS --CO
             3  CAMPYLOBACTER INFECTIONS --CONGENITAL --CN
           614  CAMPYLOBACTER INFECTIONS --DIAGNOSIS --DI
             2  CAMPYLOBACTER INFECTIONS --DIET THERAPY --DH
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              477  CAMPYLOBACTER INFECTIONS --DRUG THERAPY --DT
               11  CAMPYLOBACTER INFECTIONS --ECONOMICS --EC
                3  CAMPYLOBACTER INFECTIONS --ENZYMOLOGY --EN
              906  CAMPYLOBACTER INFECTIONS --EPIDEMIOLOGY --EP
                3  CAMPYLOBACTER INFECTIONS --ETHNOLOGY --EH
              268  CAMPYLOBACTER INFECTIONS --ETIOLOGY --ET
               23  CAMPYLOBACTER INFECTIONS --GENETICS --GE
                6  CAMPYLOBACTER INFECTIONS --HISTORY --HI
              335  CAMPYLOBACTER INFECTIONS --IMMUNOLOGY --IM
               27  CAMPYLOBACTER INFECTIONS --METABOLISM --ME
             1281  CAMPYLOBACTER INFECTIONS --MICROBIOLOGY --MI
               13  CAMPYLOBACTER INFECTIONS --MORTALITY --MO
                2  CAMPYLOBACTER INFECTIONS --NURSING --NU
              249  CAMPYLOBACTER INFECTIONS --PATHOLOGY --PA
               78  CAMPYLOBACTER INFECTIONS --PHYSIOPATHOLOGY --P
              140  CAMPYLOBACTER INFECTIONS --PREVENTION AND CONT
                4  CAMPYLOBACTER INFECTIONS --PSYCHOLOGY --PX
               10  CAMPYLOBACTER INFECTIONS --RADIOGRAPHY --RA
               11  CAMPYLOBACTER INFECTIONS --SURGERY --SU
               61  CAMPYLOBACTER INFECTIONS --THERAPY --TH
              299  CAMPYLOBACTER INFECTIONS --TRANSMISSION --TM
                3  CAMPYLOBACTER INFECTIONS --ULTRASONOGRAPHY --U
                1  CAMPYLOBACTER INFECTIONS --URINE --UR
              578  CAMPYLOBACTER INFECTIONS --VETERINARY --VE
             1577  CAMPYLOBACTER JEJUNI
                2  CAMPYLOBACTER JEJUNI --ANALYSIS --AN
               67  CAMPYLOBACTER JEJUNI --CHEMISTRY --CH
              259  CAMPYLOBACTER JEJUNI --CLASSIFICATION --CL
               12  CAMPYLOBACTER JEJUNI --CYTOLOGY --CY
              190  CAMPYLOBACTER JEJUNI --DRUG EFFECTS --DE
               39  CAMPYLOBACTER JEJUNI --ENZYMOLOGY --EN
              425  CAMPYLOBACTER JEJUNI --GENETICS --GE
              155  CAMPYLOBACTER JEJUNI --GROWTH AND DEVELOPMENT
              243  CAMPYLOBACTER JEJUNI --IMMUNOLOGY --IM
              553  CAMPYLOBACTER JEJUNI --ISOLATION AND PURIFICAT
               81  CAMPYLOBACTER JEJUNI --METABOLISM --ME
              179  CAMPYLOBACTER JEJUNI --PATHOGENICITY --PY
               80  CAMPYLOBACTER JEJUNI --PHYSIOLOGY --PH
                1  CAMPYLOBACTER JEJUNI --RADIATION EFFECTS --RE
               36  CAMPYLOBACTER JEJUNI --ULTRASTRUCTURE --UL
      S2     4441  E1-E47
?p

Ref    Items  Index-term
E49        3  CAMPYLOBACTERACEAE
E50        1  CAMPYLOBACTERAHNLICHE
?p

Ref    Items  Index-term
E1         1  CAMPYLOBACTERAHNLICHE
E2         1  CAMPYLOBACTERARTEN
E3         1  CAMPYLOBACTERCINAEDI
E4         1  CAMPYLOBACTERENTERIT
E5         1  CAMPYLOBACTEREPIDEMIOLOGI
E6        37  CAMPYLOBACTERIA
E7         1  CAMPYLOBACTERIACEAE
E8         1  CAMPYLOBACTERIAL
E9         1  CAMPYLOBACTERIASIS
E10        1  CAMPYLOBACTERIES
E11        2  CAMPYLOBACTERINFEKSJON
E12        1  CAMPYLOBACTERINFEKTION

        Enter P or PAGE for more
?p

Ref    Items  Index-term
E13        3  CAMPYLOBACTERINFEKTIONEN
E14        8  CAMPYLOBACTERIOSE
E15        1  CAMPYLOBACTERIOSES
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E16      266  CAMPYLOBACTERIOSIS
E17        2  CAMPYLOBACTERIUM
E18        9  CAMPYLOBACTERJEJUNI
E19        2  CAMPYLOBACTERLIKE
E20        1  CAMPYLOBACTERN
E21        6  CAMPYLOBACTEROSIS
E22      462  CAMPYLOBACTERS
E23        1  CAMPYLOBACTERSPECIES
E24        2  CAMPYLOBACTERSPP

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?p

Ref    Items  Index-term
E25        1  CAMPYLOBACTERSTAMME
E26        1  CAMPYLOBACTERY
E27        2  CAMPYLOBACTOR
E28        1  CAMPYLOBACTWER
E29        1  CAMPYLOBACYTER
E30        1  CAMPYLOBAKTER
E31        1  CAMPYLOBAKTERIOSE
E32        2  CAMPYLOBAKTEROVE
E33        1  CAMPYLOBASTER
E34        3  CAMPYLOBATER
E35        1  CAMPYLOBATERIOSES
E36        1  CAMPYLOBATERS

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Ref    Items  Index-term
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E39        1  CAMPYLODACTYLIA
E40        1  CAMPYLODACTYLIE
E41        1  CAMPYLODACTYLY
E42        1  CAMPYLOGNATHIA
E43        1  CAMPYLOMMA
E44        2  CAMPYLOMORMYRUS
E45        1  CAMPYLOPODA
E46        1  CAMPYLOPODIUM
E47        1  CAMPYLOPTERUS
E48        1  CAMPYLOPUS

          Enter P or PAGE for more
?s e1-ee37
>>>Invalid term: EE37
?ds

Set      Items   Description
S1        8257   E3-E50
S2        4441   E1-E47
?s e1-e37
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               1  CAMPYLOBACTERARTEN
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               1  CAMPYLOBACTERENTERIT
               1  CAMPYLOBACTEREPIDEMIOLOGI
              37  CAMPYLOBACTERIA
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               1  CAMPYLOBACTERIES
               2  CAMPYLOBACTERINFEKSJON
               1  CAMPYLOBACTERINFEKTION
               3  CAMPYLOBACTERINFEKTIONEN
               8  CAMPYLOBACTERIOSE
               1  CAMPYLOBACTERIOSES
             266  CAMPYLOBACTERIOSIS
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                2  CAMPYLOBACTERIUM
                9  CAMPYLOBACTERJEJUNI
                2  CAMPYLOBACTERLIKE
                1  CAMPYLOBACTERN
                6  CAMPYLOBACTEROSIS
              462  CAMPYLOBACTERS
                1  CAMPYLOBACTERSPECIES
                2  CAMPYLOBACTERSPP
                1  CAMPYLOBACTERSTAMME
                1  CAMPYLOBACTERY
                2  CAMPYLOBACTOR
                1  CAMPYLOBACTWER
                1  CAMPYLOBACYTER
                1  CAMPYLOBAKTER
                1  CAMPYLOBAKTERIOSE
                2  CAMPYLOBAKTEROVE
                1  CAMPYLOBASTER
                3  CAMPYLOBATER
                1  CAMPYLOBATERIOSES
                1  CAMPYLOBATERS
                1  CAMPYLOBYCTER
      S3      779  E1-E37
?ds

Set     Items   Description
S1       8257   E3-E50
S2       4441   E1-E47
S3        779   E1-E37
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e? or immunoglob? or iga or igm or igg?))
            8257  S1
            4441  S2
             779  S3
           26246  AVIAN
          625653  ANTIBOD?
           53949  ANTISER?
          237721  IMMUNE?
           31174  SEROTYP?
          237721  IMMUNE?
          205575  IMMUNOGLOB?
           29714  IGA
           39527  IGM
           85819  IGG?
            1171  AVIAN(5N)(((((((ANTIBOD? OR ANTISER?) OR IMMUNE?) OR
                  SEROTYP?) OR IMMUNE?) OR IMMUNOGLOB?) OR IGA) OR IGM) OR
                  IGG?)
      S4       1  (S1 OR S2 OR S3) AND (AVIAN (5N) (ANTIBOD? OR ANTISER? OR
                  IMMUNE? OR SEROTYP? OR IMMUNE? OR IMMUNOGLOB? OR IGA OR
                  IGM OR IGG?))
?t s4/9/all

 4/9/1
DIALOG(R)File 155:MEDLINE(R)
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05507901   87186825   PMID: 3567742
  A study of factors affecting the sensitivity of the passive
haemagglutination method for serotyping Campylobacter jejuni and
 Campylobacter coli and recommendations for a more rapid procedure.
  Fricker C R; Alemohammad M M; Park R W
  Canadian journal of microbiology (CANADA)  Jan 1987,  33  (1)  p33-9,
ISSN 0008-4166   Journal Code: 0372707
  Document type: Journal Article
  Languages: ENGLISH
  Main Citation Owner: NLM
  Record type: Completed
  Subfile:   INDEX MEDICUS
  Factors affecting the sensitivity of the passive haemagglutination method
for serotyping campylobacters have been studied. The concentration of red
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blood cells during the haemagglutination stage of the procedure markedly affected the titer obtained. An increase in concentration of red blood cells resulted in a lower titer, with titers being inversely proportional to red blood cell concentration. No differences in titer were observed when erythrocytes were sensitized at a range of pH values between pH 5.0 and pH 8.0. The time required for antigen extraction and for red blood cell sensitization was shown to be 15 min each, thus resulting in a reduction in the time required for **serotyping** . Furthermore, use of **avian** erythrocytes enabled the haemagglutination reactions to be read after incubation for only 1 h. Combining these procedures with a rapid slide haemagglutination test enables a single worker to serotype over 100 C. jejuni and C. coli isolates within 1 working day.

Tags: Animal; Comparative Study; Human; Support, Non-U.S. Gov't

Descriptors: **Campylobacter** --classification--CL; * **Campylobacter** fetus --classification--CL; *Hemagglutination Tests--methods--MT; Antigens, Bacterial; Chickens--blood--BL; Hydrogen-Ion Concentration; Serotyping --methods--MT; Sheep--blood--BL; Time Factors; Turkeys--blood--BL

CAS Registry No.: 0 (Antigens, Bacterial)

Record Date Created: 19870526

Record Date Completed: 19870526

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?s(avian or chick? or fowl? or turkey? or bird? or igy?) (5n) (antibod? or antiser? or im
mune? or serotyp? or immune? or immunoglob? or iga or igm or igg?)
          26246  AVIAN
         127853  CHICK?
           5994  FOWL?
          15337  TURKEY?
          34792  BIRD?
            250  IGY?
         625653  ANTIBOD?
          53949  ANTISER?
         237721  IMMUNE?
          31174  SEROTYP?
         237721  IMMUNE?
         205575  IMMUNOGLOB?
          29714  IGA
          39527  IGM
          85819  IGG?
      S5   12196  (AVIAN OR CHICK? OR FOWL? OR TURKEY? OR BIRD? OR IGY?)
                  (5N) (ANTIBOD? OR ANTISER? OR IMMUNE? OR SEROTYP? OR
                  IMMUNE? OR IMMUNOGLOB? OR IGA OR IGM OR IGG?)
?ds

Set     Items   Description
S1       8257   E3-E50
S2       4441   E1-E47
S3        779   E1-E37
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              IMMUNE? OR SEROTYP? OR IMMUNE? OR IMMUNOGLOB? OR IGA OR IGM OR
              IGG?))
S5      12196   (AVIAN OR CHICK? OR FOWL? OR TURKEY? OR BIRD? OR IGY?) (5N)
              (ANTIBOD? OR ANTISER? OR IMMUNE? OR SEROTYP? OR IMMUNE? OR I-
              MMUNOGLOB? OR IGA OR IGM OR IGG?)
?s (s1 or s2 or s3) and s5
          8257  S1
          4441  S2
           779  S3
         12196  S5
      S6    45  (S1 OR S2 OR S3) AND S5
?s s6 not s4
            45  S6
             1  S4
      S7    44  S6 NOT S4
?s s7/2000:2003
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       1844888  PY=2000 : PY=2003
      S8     6  S7/2000:2003
?s s7 not s8
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             6  S8
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      S9       38  S7 NOT S8
?t s9/9/all
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YSTEM:OS  - DIALOG OneSearch
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         (c) format only 2003 The Dialog Corp.
*File 155: Medline has been reloaded and accession numbers have
changed.  Please see HELP NEWS 155.
  File 654:US PAT.FULL.  1976-2003/Aug 14
         (c) FORMAT ONLY 2003 THE DIALOG CORP.
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  File 347:JAPIO  Oct 1976-2003/Apr(Updated 030804)
         (c) 2003 JPO & JAPIO
*File 347: JAPIO data problems with year 2000 records are now fixed.
Alerts have been run.  See HELP NEWS 347 for details.
  File 160:Gale Group PROMT(R)  1972-1989
         (c) 1999 The Gale Group
  File  65:Inside Conferences  1993-2003/Aug W3
         (c) 2003 BLDSC all rts. reserv.
  File 143:Biol. & Agric. Index  1983-2003/Jul
         (c) 2003 The HW Wilson Co
  File 370:Science  1996-1999/Jul W3
         (c) 1999 AAAS
*File 370: This file is closed (no updates). Use File 47 for more current
information.
  File 340:CLAIMS(R)/US Patent  1950-03/Aug 14
         (c) 2003 IFI/CLAIMS(R)
*File 340: The Claims U.S. Patent databases have been reloaded.
 HELP NEWS340 & HELP ALERTS340 for search, display & Alert info.
  File 203:AGRIS  1974-2003/Aug
        Dist by NAL, Intl Copr. All rights reserved
  File 185:Zoological Record Online(R)  1978-2003/Aug
         (c) 2003 BIOSIS
  File  94:JICST-EPlus  1985-2003/Aug W2
         (c)2003 Japan Science and Tech Corp(JST)
  File 636:Gale Group Newsletter DB(TM)  1987-2003/Aug 15
         (c) 2003 The Gale Group
  File 444:New England Journal of Med.  1985-2003/Aug W3
         (c) 2003 Mass. Med. Soc.
  File  16:Gale Group PROMT(R)  1990-2003/Aug 15
         (c) 2003 The Gale Group
*File  16: Alert feature enhanced for multiple files, duplicate
removal, customized scheduling. See HELP ALERT.

      Set  Items  Description
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Cost is in DialUnits
?ds

Set     Items   Description
S1       7276   (AVIAN? OR CHICKEN? OR TURKEY? OR FOWL? OR BIRD? OR IGY?) -
            (100N) (ANTIBOD? OR MONOCLON? OR POLYCLONAL? OR ANTISER? OR I-
            MMUNE? OR IMMUNOGLOB?) (100N) (FLAGELLALESS? OR NONFLAGEL? OR
            AFLAGEL? OR KDA OR K)
S2        373   S1 AND CAMPYLOBAC?
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antibiotic intervention with macrolids...

...34). Johnson
5 and Lior (19) originally reported that 410@o of 718
isolates of **Campylobacter** sp. screened for the production
of CLDT were positive; however, isolates screened for the
cdt13...said target.

The invention also relates to a method of detecting
25 the presence of **Campylobacter** jejuni infection,
characterized by the steps of: a) contacting a sample
obtained from a patient...

...a time sufficient to allow formation of a
complex between said protein and any anti- **Campylobacter**
jejuni antibodies present in said sample; and b) detecting
the presence of, and optionally the...

...comprises an isolated
expression vector, characterized by a region encoding a
-5
porA protein of **Campylobacter** jejuni, or an antigenic
fragment thereof.

Included within the invention is a method of inducing...
...aspect of the invention is a method of
producing antibodies for testing for infection by
Campylobacter jejuni, characterized in that a protein
having an amino acid sequence of SEQ ID NO...h;
Figure 8 shows western blot analysis of the isolated
cytotoxic porin-LPS complex from **Campylobacter** sp using 40
Ag of crude, concentrated filtrate and homologous rabbit
antiserum. Lanes 1 and...present invention is based on the identification
5 of a porin-lipopolysaccharide (LPS) complex from
Campylobacter jejuni that is an endotoxin and that is
fairly well conserved amongst strains of the organism, but
not widely found in other **Campylobacter** species. The
complex has been isolated and a corresponding porin gene,
10 designated 11porA,11...subsequently stored at -700C in try-ptic soy
broth
containing 5% sheep blood. Strains of **Campylobacter** sp.

and related organisms were maintained at -800C in
glycerol-peptone water as part of...ompC of S. typhi (29), a 45i
similarity and 200i identity
25 was found.
Screening **Campylobacter** sp. for porA and cytotoxin
production.

Results of screening C. jejuni for phenotypic ...gene are summarized
30 in Table 2. It was found that all 32 strains of
Campylobacter sp. and related organisms produced a
cytotoxic component when the filtrate from the biphasic
-44...

...of C. jejuni, especially Lior
serotype 82, but was not conserved between related species
of **Campylobacter** .

DISCUSSION
The 1275 bp ORF had a '@.guanosine+cytosine content of
36.8 mol % (Fig...contained at least
-49
part, if not all of the intact gene while the other
Campylobacter sp. and related organism were PCR negative.

Previous reports indicated that only 60'i of...
...are valuable, and provide a new and
efficient method to identify C. jejuni from other

Campylobacter sp. The potential for the development of a recombinant vaccine using the porin protein is...on immuno-blot analysis. Western blots of crude concentrated filtrates from various cytotoxic strains of **Campylobacter** species showed the presence of a protein with a molecular mass similar to that of...comparable molecular weight was also present in crude concentrated filtrates from other cytotoxic strains of **Campylobacter** sp., indicating that the release of the porin-LPS complex 25 was not unique to...been cloned and sequenced, a fuller understanding of the role of the porin in clinical **campylobacteriosis** will be forthcoming. Such evaluations may suggest potential roles for the porin-LPS complex as...COUNTRY: France
(F) POSTAL CODE (ZIP): 13009
(ii) TITLE OF INVENTION: A PORIN GENE FROM **CAMPYLOBACTER** JEJUNI, RELATED PRODUCTS AND USES THEREOF
(iii) NUMBER OF SEQUENCES: 31
-70 (iv) COMPUTER READABLE...unknown
(ii) MOLECULE TYPE: protein
(v) FRAGMENT TYPE: N-terminal
(vi) ORIGINAL SOURCE.

(A) ORGANISM: **Campylobacter** jejuni
(B) STRAIN: 2483
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2.

Met Lys Leu Val...STRANDEDNESS: double
(D) TOPOLOGY: linear
(ii) MOLECULE TYPE: DNA (genomic)
(vi) ORIGINAL SOURCE.

(A) ORGANISM: **Campylobacter** jejuni
(B) STRAIN: 2483
(xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3.

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-100
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Dis. 1997; 176 (Suppl 2): S125

Claim
... purif ied nucleic acid, characterized in that said nucleic acid encodes a porA protein of **Campylobacter** jejuni, or an antigenic fragment thereof.

2 A nucleic acid according to claim 1, characterized...

...acid according to claim 1, characterized in that it is derived from strain 2483 of **Campylobacter** 10 jejuni (ATCC Accession No.

4 A nucleic acid according to claim 1, characterized in...

...probe to bind specifically to said target.

59 A method of detecting the presence of **Campylobacter** jejuni infection, characterized by the steps of:
a) contacting a sample obtained from a patient...

...time sufficient to 10 allow formation of a complex between said protein and any anti- **Campylobacter** jejuni antibodies present in said sample; and
b) detecting the presence of, and optionally the...

...said complex formed during step (a).
15 10. A method of detecting the presence of **Campylobacter** jejuni in a patient, characterized by obtaining from said patient a sample suspected of containing **Campylobacter** jejuni, and detecting whether the characteristic nucleic acid of claim 1, claim 2, claim 3...

...103

14 An isolated expression vector, characterized by a region encoding a porA protein of **Campylobacter** jejuni, or an antigenic ...said complex.
19 A vaccine comprising an immunogenically effective amount of the porA antigen of **Campylobacter** ' ' . or 3e3un7
antigenic fragment thereof and a pharmaceutically acceptable carrier.
20 20. A vaccine, characterized...

...human or animal body.

22 A method of producing antibodies for testing for infection by **Campylobacter** jejuni, characterized in that a 5 protein having an amino acid sequence of SEQ ID...
?t s4/9/62 64 68

4/9/62 (Item 3 from file: 5)
DIALOG(R)File 5:Biosis Previews(R)
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10109393 BIOSIS NO.: 199698564311

Identification and characterization of an immunogenic outer membrane protein of Campylobacter **jejuni.**

AUTHOR: Burnens Andre; Stucki Urs; Nicolet Jacques; Frey Joachim(a)
AUTHOR ADDRESS: (a)Inst. Veterinary Bacteriol., Univ. Berne, Langgassstrasse 122, CH-3012 Berne**Switzerland
JOURNAL: Journal of Clinical Microbiology 33 (11):p2826-2832 1995
ISSN: 0095-1137
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English

ABSTRACT: We cloned and expressed in Escherichia coli a gene encoding an 18- **kDa** outer membrane protein (Omp18) from **Campylobacter** jejuni ATCC 29428. The nucleotide sequence of the gene encoding Omp18 was determined, and an open reading frame of 165 amino acids was revealed. The amino acid sequence had the typical features of a leader sequence and a signal peptidase II cleavage site at the N-terminal part of Omp18. Moreover, the sequence had a high degree of similarity to the peptidoglycan-associated outer membrane lipoprotein P6 of Haemophilus influenzae and the peptidoglycan-associated lipoprotein PAL of E. coli. Southern blot analysis in which the cloned gene was used as a probe revealed genes similar to that encoding Omp18 in all species of the thermophilic group of **campylobacters** as well as **Campylobacter** sputorum. All **campylobacters** tested expressed a protein with a molecular mass identical to that of Omp18. The protein reacted immunologically with **polyclonal antibodies** directed against Omp18 from C. jejuni. PCR amplification of the gene encoding Omp18 with specific primers and subsequent restriction enzyme analysis of the amplified DNA fragments showed that the gene for Omp18 is highly conserved in C. jejuni strains isolated from humans, dogs, cats, calves, and **chickens** but is different in other Campylohacter species. In order to obtain pure recombinant Omp18 protein for serological assays, the cloned gene for Omp18 was genetically modified by replacing the signal sequence with a DNA segment encoding six adjacent histidine residues. Expression of this construct in E. coli allowed showed no reaction with this antigen. Omp18, which is an outer membrane protein belonging to the family of PALs is well conserved in C. jejuni and is highly immunogenic. It is therefore a good candidate as an antigen for the serological diagnosis of past C. jejuni infections.

REGISTRY NUMBERS: 170613-04-4: GENBANK-X83374
DESCRIPTORS:
MAJOR CONCEPTS: Biochemistry and Molecular Biophysics; Blood and Lymphatics (Transport and Circulation); Immune System (Chemical Coordination and Homeostasis); Infection; Membranes (Cell Biology); Pathology; Veterinary Medicine (Medical Sciences)
BIOSYSTEMATIC NAMES: Aerobic Helical or Vibrioid Gram-Negatives--Eubacteria, Bacteria; Bovidae--Artiodactyla, Mammalia, Vertebrata, Chordata, Animalia; Canidae--Carnivora, Mammalia, Vertebrata, Chordata, Animalia; Felidae--Carnivora, Mammalia, Vertebrata, Chordata, Animalia; Galliformes--Aves, Vertebrata, Chordata, Animalia; Hominidae--Primates, Mammalia, Vertebrata, Chordata, Animalia; Pasteurellaceae--Eubacteria, Bacteria; Trogoniformes--Aves, Vertebrata, Chordata, Animalia
ORGANISMS: aerobic helical or vibrioid gram-negative bacteria (Aerobic Helical or Vibrioid Gram-Negatives); calf (Bovidae); cat (Felidae); chicken (Galliformes); dog (Canidae); human (Hominidae); **Campylobacter** jejuni (Aerobic Helical or Vibrioid Gram-Negatives); **Campylobacter** sputorum (Aerobic Helical or Vibrioid Gram-Negatives); Haemophilus influenzae (Pasteurellaceae); Trogoniformes (Trogoniformes
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; artiodactyls; bacteria; birds; carnivores; chordates; eubacteria; humans; mammals; microorganisms; nonhuman mammals; nonhuman vertebrates; primates; vertebrates
CHEMICALS & BIOCHEMICALS: GENBANK-X83374
MOLECULAR SEQUENCE DATABANK NUMBER: molecular sequence data; nucleotide sequence; EMBL-X83374; GENBANK-X83374
MISCELLANEOUS TERMS: INFECTION; OPEN READING FRAME; OUTER MEMBRANE PROTEIN 18 GENE; PEPTIDOGLYCAN-ASSOCIATED OUTER MEMBRANE LIPOPROTEIN P6 SIMILARITY; SEROLOGICAL DIAGNOSIS
CONCEPT CODES:

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             $0.30     0.054 DialUnits File5
                $3.50  2 Type(s) in Format  9
             $3.50  2 Types
      $3.80  Estimated cost File5
             $0.04     0.009 DialUnits File35
      $0.04  Estimated cost File35
             $0.05     0.018 DialUnits File10
                $1.35  1 Type(s) in Format  9
             $1.35  1 Types
      $1.40  Estimated cost File10
             $0.03     0.009 DialUnits File144
      $0.03  Estimated cost File144
             $0.10     0.009 DialUnits File347
      $0.10  Estimated cost File347
             $0.05     0.009 DialUnits File160
      $0.05  Estimated cost File160
             $0.03     0.009 DialUnits File65
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      $0.14  Estimated cost File340
             $0.02     0.009 DialUnits File203
      $0.02  Estimated cost File203
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      $0.05  Estimated cost File636
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      $0.04  Estimated cost File444
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      $0.22  TELNET
      $8.85  Estimated cost this search
      $8.85  Estimated total session cost   0.430 DialUnits


### Status: Signed Off. (1 minutes)
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10973131 97325879 PMID: 9182891

Oral administration of antibodies as prophylaxis and therapy in Campylobacter **jejuni-infected chickens.**

Tsubokura K; Berndtson E; Bogstedt A; Kaijser B; Kim M; Ozeki M; Hammarstrom L

Department of Clinical Immunology, Huddinge Hospital, Sweden.

Clinical and experimental immunology (ENGLAND) Jun 1997, 108 (3) p451-5, ISSN 0009-9104 Journal Code: 0057202

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Passive immunity against gastrointestinal infections has recently been successfully applied as prophylaxis and therapy in patients in a variety of virally and bacterially induced infections. **Campylobacter** jejuni is frequently associated with acute diarrhoea in humans, and several species of animals have been shown to transmit the disease, although birds have been implicated as the main source of infection. We used bovine and **chicken immunoglobulin** preparations from the milk and eggs, respectively, of immunized animals for prophylactic and therapeutic treatment of chickens infected with C. jejuni. A marked prophylactic effect (a >99% decrease in the number of bacteria) was noted using either antibody preparation, whereas the therapeutic efficacy, i.e. when antibodies were given after the infection was established, was distinctly lower (80-95%) as judged by faecal bacterial counts. These observations may serve as a starting point for experiments aimed at elimination of the infection in an industrial or farm setting. It may also encourage future attempts to treat, prophylactically or therapeutically, patients with **Campylobacter** -induced diarrhoea.

Tags: Animal; Female; Support, Non-U.S. Gov't

Descriptors: Antibodies, Bacterial--therapeutic use--TU; * **Campylobacter** Infections--prevention and control--PC; * **Campylobacter** jejuni --immunology--IM; Administration, Oral; **Campylobacter** Infections--therapy --TH; Cattle; Chickens; Immunization, Passive

CAS Registry No.: 0 (Antibodies, Bacterial)

Record Date Created: 19970626

Record Date Completed: 19970626

11654827 99089498 PMID: 9874102

The specificity of antibody **in** chickens **immunised to reduce intestinal colonisation with** Campylobacter **jejuni.**

Widders P R; Thomas L M; Long K A; Tokhi M A; Panaccio M; Apos E
Australian Quarantine and Inspection Service, Mascot, NSW. phillip.widders@dpie.gov.au

Veterinary microbiology (NETHERLANDS) Nov 1998, 64 (1) p39-50, ISSN 0378-1135 Journal Code: 7705469
Document type: Journal Article
Languages: ENGLISH
Main Citation Owner: NLM
Record type: Completed
Subfile: INDEX MEDICUS

Poultry consumption has been identified as a major risk factor for human infection with **Campylobacter** jejuni in developed countries. C. jejuni is present in the gastrointestinal tract of broiler **chickens** at the time of slaughter, and faecal contamination of carcases during processing results in significant **campylobacter** loads on carcases. One approach to reducing the level of carcase contamination with C. jejuni is to control **campylobacter** infection in broiler **chickens** . To this end, the study described here investigated the specificity of **antibody** in serum and intestinal secretions of **chickens** that had been immunised with **campylobacter** antigens and then challenged with viable bacteria. The immunodominant antigens in the serum of **birds** that showed a 2-log reduction in caecal colonisation with C. jejuni included flagellin protein (61-63 **Kd**) and three additional antigens of 67, 73.5 and 77.5 **Kd** . Only flagellin and the 67 **Kd** antigen were recognised by **IgG antibody** in gastrointestinal secretions of the same **birds** . **Antibody** from **chickens** immunised with purified native flagellin protein recognised flagellin protein and the 67 **Kd** antigen in **Western blots** probed with serum, but only the flagellin proteins (61-63 **Kd**) in **Westerns** probed with gastrointestinal secretions. Analysis of the specificity of the response to flagellin protein using recombinant clones that expressed regions of the flagellin gene suggests that epitopes in each region of the flagellin protein were immunogenic. Of the immunodominant antigens, only flagellin appeared to be surface-exposed on viable C. jejuni, although conformational epitopes of flagellin appeared to be sensitive to the method of antigen purification. The results of this study suggest that flagellin and possibly the 67 **Kd** antigen may be valuable for immunological control of intestinal infection with C. jejuni in **chickens** , but that further work is required to purify these as vaccine candidates by using methods that preserve conformational epitopes.

Tags: Animal; Support, Non-U.S. Gov't
Descriptors: **Antibodies** , Bacterial--immunology--IM; * **Antibody** Specificity; * **Campylobacter** Infections--veterinary--VE; * **Campylobacter**

11829439 99269532 PMID: 10337238

Biotin-streptavidin enzyme-linked immunosorbent assay for the detection of antibodies to Campylobacter **jejuni and C. coli in chickens.**

Haas B; Hinz K H; Glunder G

Clinic for Poultry, Hanover School of Veterinary Medicine, Germany.

Zentralblatt fur Veterinarmedizin. Reihe B. Journal of veterinary medicine. Series B (GERMANY) Apr 1999, 46 (3) p163-71, ISSN 0514-7166 Journal Code: 0331325

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

An enzyme-linked immunosorbent assay (ELISA) was developed in a homologous system with bacterial ultrasonic-treated proteins as the antigen and **antisera** from **chickens** infected orally and subcutaneously with the strain **Campylobacter** jejuni serovar 6 (CJ 6). The cut-off level was determined using antisera from non-infected specific-pathogen-free chickens up to the age of 10 weeks. The suitability of the ELISA system was verified using **antisera** taken from **chickens** orally infected at the age of 4 weeks with CJ 1, 6, 28 or 36 or with **Campylobacter** coli serovar 28 (CC 28). The development of antibodies was monitored up to 6 weeks post-infection (p.i.). Sera from chickens infected with CJ 1, 6, 36 or CC 28 contained specific antibodies to **Campylobacter** , whereas in those infected with CJ 28 no specific antibodies were found. Distinct cross-reactions were observed between CJ 6, 28 and CC 28 antigens and their antisera 6 weeks p.i., while poor cross-reactions were found with antisera to CJ 1 and 28. Antibodies to strains of all heterologous serovars were successfully detected with an antigen pool comprised of CJ 1, 6 and 36 antigens. In 11 out of the 12 field sera obtained from 5- and 9-week-old broiler **chickens** suffering from **campylobacteriosis** , high specific **antibody** titres to **Campylobacter** jejuni were found.

Tags: Animal

10700234 97049491 PMID: 8894221

Immunisation of chickens to reduce intestinal colonisation with Campylobacter jejuni.

Widders P R; Perry R; Muir W I; Husband A J; Long K A

Department of Agriculture, Energy and Minerals, Victorian Institute of Animal Science, Attwood, Australia.

British poultry science (ENGLAND) Sep 1996, 37 (4) p765-78, ISSN 0007-1668 Journal Code: 15740290R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

1. Systemic and intestinal **antibody** titres were measured in **chickens** following subcutaneous, intraperitoneal (i.p.), oral (p.o.) and combined i.p./p.o. administration of antigen, in soluble, emulsified or microparticulate form. Antigens tested included keyhole limpet haemocyanin (KLH), killed **Campylobacter** jejuni whole cells and purified **campylobacter** flagellin protein. 2. The effect of immunisation with purified flagellin protein or with killed C. jejuni whole cells in reducing intestinal colonisation was assessed. The ability of newlyhatched chicks to respond to immunisation was limited, possibly because of the immaturity of the immune system rather than maternal suppression of an **immune** response. Only 5 to 13 **birds** that were first immunised when 1-d-old with KLH showed a systemic response, even after 4 immunisations, whereas 10 of 11 birds that were first immunised at 24 d-old responded systemically. 3. In an immunisation and challenge experiment, birds that were immunised twice intraperitoneally, at 16 and 29 d-old, with killed C. jejuni whole cells, had fewer C. jejuni, in the caecal contents than unimmunised control birds. This reduction in intestinal colonisation, to less than 2% of bacterial numbers in control birds, was associated with an increase in specific IgG in intestinal secretions. There was no significant increase in specific IgA or IgM in intestinal secretions following immunisation and challenge. 4. These results indicate that immunisation can reduce the level of intestinal infection with C. jejuni. The protection may be enhanced by developing improved methods of immunisation that stimulate production of increased titres of specific antibody in intestinal secretions, particularly specific IgA antibody.

Tags: Animal; Female; Support, Non-U.S. Gov't

Descriptors: Antibodies, Bacterial--metabolism--ME; * **Campylobacter** Infections--veterinary--VE; * **Campylobacter** jejuni --isolation and purification--IP; *Chickens--immunology--IM; *Intestines--microbiology--MI; *Poultry Diseases--immunology--IM; *Poultry Diseases --prevention and control--PC; *Vaccines, Inactivated--pharmacology--PD; Antibodies, Bacterial--immunology--IM; Antigens--immunology--IM; Antigens--metabolism --ME; Antigens, Bacterial--immunology--IM; Antigens, Bacterial--metabolism --ME; **Campylobacter** Infections--immunology--IM; **Campylobacter** Infections--prevention and control--PC; **Campylobacter** jejuni--immunology --IM; Feces--microbiology--MI; Flagellin--immunology--IM; Flagellin --pharmacology--PD; Hemocyanin--immunology--IM; Hemocyanin--pharmacology --PD; Immunoglobulin A--immunology--IM; Immunoglobulin A--metabolism--ME; Immunoglobulin G--immunology--IM; Immunoglobulin G--metabolism--ME; Intestines--drug effects--DE; Time Factors; Vaccines, Inactivated --immunology--IM

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens); 0 (Antigens, Bacterial); 0 (Immunoglobulin A); 0 (Immunoglobulin G); 0 (Vaccines, Inactivated); 12777-81-0 (Flagellin); 9013-72-3 (Hemocyanin)

Record Date Created: 19970206

Record Date Completed: 19970206

10291007 96092877 PMID: 8590089

In ovo oral vaccination with Campylobacter **jejuni establishes early development of intestinal immunity in chickens.**

Noor S M; Husband A J; Widders P R

Department of Veterinary Pathology, University of Sydney, New South Wales, Australia.

British poultry science (ENGLAND) Sep 1995, 36 (4) p563-73, ISSN 0007-1668 Journal Code: 15740290R

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

1. Chick embryos were orally immunised at day 16 of incubation by injection of heat-killed **Campylobacter** jejuni organisms into the amniotic fluid. The response to vaccination was observed at 5 d after hatching or, in some birds which received a postnatal oral booster vaccination, at 7 d after hatching, and the response was observed at 14 d of age. 2. The titres of antibody in serum, bile and intestinal scrapings, the distribution of immunoglobulin-containing cells in the spleen, duodenum and ileum and the expression on peripheral blood leukocytes (PBL) of the T cell surface markers CD3, CD4 and CD8 were determined. 3. Whereas low titres of anti-flagellin antibody were detected in serum, bile and intestinal scrapings of unimmunised birds, high titres were observed in immunised **birds** . 4. An increase in **antibody** of all isotypes was detectable in serum but the elevation in IgA antibody in intestinal scrapings and bile was particularly striking. This response was reflected in a dramatic increase in immunoglobulin-containing cells, detected by fluorescent histology, particularly those associated with IgA and IgM isotypes in the spleen and intestine of immunised birds. 5. Secondary oral boosting after hatching resulted in a depression in serum anti-flagellin **antibody** in immunised **birds** compared to pre-boosting titres (although still significantly higher than in non-immunised controls) but an increase in IgA antibody in intestinal scrapings and bile. The number of immunoglobulin-containing cells was also increased after boosting. 6. Neither immunisation regimen caused a significant change in the numbers of circulating CD3, CD4 or CD8 T cells. 7. These results indicate that in ovo oral immunisation with C. jejuni antigens stimulates the precocious development of immunity in chicks.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: **Campylobacter** Infections--veterinary--VE; * **Campylobacter** jejuni--immunology--IM; *Chickens--immunology--IM; *Intestines--immunology --IM; *Poultry Diseases--immunology--IM; *Vaccination--veterinary--VE; Administration, Oral; Amnion--immunology--IM; Antibodies, Bacterial --analysis--AN; Antibodies, Bacterial--blood--BL; Antigens, CD3--analysis --AN; Antigens, CD4--analysis--AN; Antigens, CD8--analysis--AN; Bile --immunology--IM; **Campylobacter** Infections--immunology--IM; **Campylobact er** Infections--prevention and control--PC; Chickens--metabolism--ME; Chickens--microbiology--MI; Immunity, Mucosal; Immunization, Secondary --veterinary--VE; Immunoglobulins--analysis--AN; Immunoglobulins--blood --BL; Intestines--microbiology--MI; Lymphocytes--cytology--CY; Lymphocytes --immunology--IM; Poultry Diseases--prevention and control--PC; Vaccination --methods--MT; Weight Gain--physiology--PH

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens, CD3); 0 (Antigens, CD4); 0 (Antigens, CD8); 0 (Immunoglobulins)

Record Date Created: 19960325

Record Date Completed: 19960325

08383145 95071121 PMID: 7526839

Isotype, specificity, and kinetics of systemic and mucosal antibodies **to** Campylobacter **jejuni antigens, including flagellin, during experimental oral infections of** chickens .

Cawthraw S; Ayling R; Nuijten P; Wassenaar T; Newell D G

Central Veterinary Laboratory (Weybridge), New Haw, Addlestone, Surrey, United Kingdom.

Avian diseases (UNITED STATES) Apr-Jun 1994, 38 (2) p341-9, ISSN 0005-2086 Journal Code: 0370617

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

The **immune** response of **chickens** to **Campylobacter** jejuni infection was studied as a step in the search for vaccine candidates. One-day-old **chicks** orally challenged with C. jejuni strain 81116 showed significant increases in specific **IgG** , **IgA** , and **IgM** circulating **antibodies** , as detected by enzyme-linked immunosorbent assay (ELISA). These levels peaked at 9, 5, and 7 weeks postinfection, respectively. Maternal **IgG antibodies** were also detected over the first 2 weeks. Specific mucosal **IgG** and **IgA antibody** levels also increased significantly. All of the **birds** demonstrated a major response to the 62- **kDa** flagellin protein by **Western blotting** techniques. The immunodominance of flagellin was confirmed by ELISA using an antigen preparation from an aflagellate mutant. When overlapping recombinant polypeptide fragments of flagellin were used, epitopes detected by **chicken antibodies** were observed in region IV, between residues 95-340 of the protein. Thus flagellin may be suitable candidate for a vaccine, although its role in protection must first be established.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: **Antibodies** , Bacterial--biosynthesis--BI; *Antigens, Bacterial--immunology--IM; * **Campylobacter** Infections--immunology--IM; * **Campylobacter** jejuni--immunology--IM; *Flagellin--immunology--IM; * **Immunoglobulin** G--biosynthesis--BI; * **Immunoglobulin** Isotypes --biosynthesis--BI; *Intestinal Mucosa--immunology--IM; **Antibodies** , Bacterial--blood--BL; **Antibodies** , Bacterial--classification--CL; **Antibody** Specificity; **Blotting** , **Western** ; **Chickens** ; Enzyme-Linked Immunosorbent Assay; Epitopes--analysis--AN; **Immunoglobulin** G--blood--BL; **Immunoglobulin** G--classification--CL; **Immunoglobulin** Isotypes --classification--CL

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens, Bacterial); 0 (Epitopes); 0 (Immunoglobulin G); 0 (Immunoglobulin Isotypes); 12777-81-0 (Flagellin)

Record Date Created: 19941129

Record Date Completed: 19941129

11197973 98074583 PMID: 9413103

Campylobacter **jejuni in broiler chickens: colonization and humoral immunity following oral vaccination and experimental infection.**

Rice B E; Rollins D M; Mallinson E T; Carr L; Joseph S W

Enteric Diseases Program, Naval Medical Research Institute, Bethesda, MD 20889-5607, USA.

Vaccine (ENGLAND) Dec 1997, 15 (17-18) p1922-32, ISSN 0264-410X Journal Code: 8406899

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

A formalin inactivated, **Campylobacter** jejuni whole cell vaccine, either with or without Escherichia coli heat labile toxin (LT) as a mucosal adjuvant, was administered orally to broiler chickens. Three vaccine trials were performed, differing in the number of vaccinations, and time of administration, as well as the inclusion and dose of LT. The overall reductions of C. jejuni colonization in the vaccinated chickens ranged from 16 to 93% compared with non-vaccinated controls. Enhanced levels of anti-C. jejuni secretory **IgA antibodies** were demonstrated in vaccinated **chickens** . Vaccination also appeared to induce an anamnestic response to C. jejuni antigens in the 14-33 kDa range, as demonstrated by Western immunoblots. Interestingly, the inclusion of LT in the vaccine regimen did not appear to boost the immunogenicity of the vaccine. These results are encouraging and suggest that future development of successful oral vaccines for the control of enteropathogenic **Campylobacter** in poultry is feasible.

Tags: Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.

Descriptors: Bacterial Vaccines--therapeutic use--TU; * **Campylobacter** Infections--veterinary--VE; * **Campylobacter** jejuni--immunology--IM; *Poultry Diseases--immunology--IM; *Poultry Diseases --prevention and control--PC; Administration, Oral; Antibody Formation--immunology--IM; **Campylobacter** Infections--immunology--IM; **Campylobacter** Infections --prevention and control--PC; Poultry Diseases--metabolism--ME; Vaccines, Inactivated--therapeutic use--TU

CAS Registry No.: 0 (Bacterial Vaccines); 0 (Vaccines, Inactivated)

Record Date Created: 19980223

Record Date Completed: 19980223

10257830 96059438 PMID: 7483909

Development of humoral precipitating antibodies **to** Campylobacter **spp. in** chickens]

Entwicklung humoraler prazipitierender Antikorper gegen **Campylobacter** spp. beim Huhn.

Glunder G

Klinik fur Geflugel, Tierarztlichen Hochschule Hannover.

Zentralblatt fur Veterinarmedizin. Reihe B. Journal of veterinary medicine. Series B (GERMANY) Apr 1995, 42 (2) p89-99, ISSN 0514-7166 Journal Code: 0331325

Document type: Journal Article ; English Abstract

Languages: GERMAN

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Development of humoral precipitating **antibodies** against **Campylobacter** spp. in **chickens** . The development of precipitating **antibodies** in **chickens** was examined by two-dimensional immunodiffusion test after immunization with a formol inactivated vaccine and after subcutaneous and oral application of different live **campylobacter** serovars. The supernatant of bacterial cells after sonication and centrifugation was used as an antigen in the agar-gel precipitin test. Antisera against different **campylobacter** serovars showed a high percentage of cross-reactions. In chickens immunized with an inactivated vaccine at an age of 1, 2, 3, 4 and 7 weeks, precipitating antibodies could be demonstrated for the first time at 7 days p.i. Except for 1-week-old birds, sera from the other groups reacted positively at 14 days p.o. After subcutaneous duplication of live organisms to 4-week-old **chickens** , **antibodies** could already be demonstrated at 4 days p.i. later in part of the experimental groups. No interrelation could be detected between antibody titers, measured by enzyme-linked immunoabsorbent assay (ELISA), from precipitating sera, as well as from those from non-precipitating sera. Precipitating antibodies and antibody titers in the ELISA were examined in sera from groups of birds infected at an age of 1, 2, 3, 4 and 7 weeks. During the **Campylobacter** excretion period, a distinct peak of antibody titers occurred in 1- and 7-week old birds, whereas other groups showed a steady increase in titers. Precipitating antibodies were only found in 1- and 2-week-old chickens.

Tags: Animal

Descriptors: Antibodies, Bacterial--biosynthesis--BI; *Bacterial Vaccines --immunology--IM; * **Campylobacter** --immunology--IM; * **Campylobacter** Infections--veterinary--VE; *Chickens; *Poultry Diseases--immunology--IM; **Campylobacter** Infections--immunology--IM; Immunodiffusion--veterinary--VE ; Vaccines, Inactivated--immunology--IM

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Bacterial Vaccines); 0 (Vaccines, Inactivated)

Record Date Created: 19951127

Record Date Completed: 19951127

10200549 96001607 PMID: 8526019

Biological properties of yolk immunoglobulins.

Janson A K; Smith C I; Hammarstrom L

Dept of Clinical Immunology, Karolinska Institute, Huddinge Hospital, Sweden.

Advances in experimental medicine and biology (UNITED STATES) 1995, 371A p685-90, ISSN 0065-2598 Journal Code: 0121103

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

Tags: Animal; Comparative Study; Female; Human

Descriptors: Antibodies, Bacterial--immunology--IM; * **Campylobacter jejuni**--immunology--IM; *Egg Proteins--immunology--IM; *Immunoglobulins --immunology--IM; *Shigella flexneri--immunology--IM; Antibodies, Bacterial --isolation and purification--IP; Bacterial Vaccines--immunology--IM; Chickens; Egg Proteins--isolation and purification--IP; Enzyme-Linked Immunosorbent Assay; Granulocytes--immunology--IM; Granulocytes --microbiology--MI; Hela Cells; Hemagglutination Tests; Immunization, Secondary; Immunoglobulins--isolation and purification--IP; Phagocytosis; Shigella flexneri--physiology--PH; Vaccination

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Bacterial Vaccines); 0 (Egg Proteins); 0 (IgY); 0 (Immunoglobulins)

Record Date Created: 19960124

Record Date Completed: 19960124

06814168 91054093 PMID: 2241686

Influence of antibody treatment of Campylobacter **jejuni on the dose required to colonize chicks.**

Stern N J; Meinersmann R J; Dickerson H W

Poultry Microbiological Safety Research Unit, Richard B. Russell Agricultural Research Center, USDA-Agricultural Research Service, Athens, Georgia 30613.

Avian diseases (UNITED STATES) Jul-Sep 1990, 34 (3) p595-601, ISSN 0005-2086 Journal Code: 0370617

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

This study was designed to clarify the role of **antibodies** in controlling **chicken** colonization by **Campylobacter** jejuni. Cecal colonization by C. jejuni was compared after the organism was exposed either to phosphate-buffered saline, normal rabbit serum, rabbit hyperimmune anti-C. jejuni serum, or anti-C. jejuni **antibodies** extracted from **chicken** bile. **Antibodies** from **chicken** bile were extracted by affinity absorption against outer-membrane proteins from the challenge organism. Sera were heated 1 hour at 56 C to destroy complement activity. Bacterial inoculum levels were enumerated after 1 hour exposure at 4 C to the various treatments. The heated sera and the bile antibodies were not bactericidal, and bacterial agglutination was not evident. Serial dilutions of the antibody-treated C. jejuni were given by gavage into 1-day-old chicks. Six days later, the ceca were removed from the chicks, and samples were cultured on **Campylobacter** -charcoal differential agar. The colonization dose-50% was increased by twofold to 160-fold when the organism was preincubated with hyperimmune antiserum or the bile antibodies as compared with preincubation with phosphate-buffered saline. We conclude that **antibodies** inhibit **chicken** cecal colonization by C. jejuni.

Tags: Animal; Support, Non-U.S. Gov't; Support, U.S. Gov't, Non-P.H.S.

Descriptors: **Campylobacter** Infections--veterinary--VE; * **Campylobacter** jejuni--immunology--IM; *Chickens; *Immunization, Passive; *Poultry Diseases--immunology--IM; Bile--immunology--IM; **Campylobacter** Infections --immunology--IM; **Campylobacter** jejuni--growth and development--GD; Carrier State--immunology--IM; Carrier State--veterinary--VE; Cecum --microbiology--MI; Colony Count, Microbial; Dose-Response Relationship, Immunologic; Enzyme-Linked Immunosorbent Assay; Immune Sera--immunology--IM ; Immunoglobulin A, Secretory--immunology--IM; Immunoglobulin A, Secretory --isolation and purification--IP

CAS Registry No.: 0 (Immune Sera); 0 (Immunoglobulin A, Secretory)

Record Date Created: 19901207

Record Date Completed: 19901207

06814167 91054092 PMID: 2241685

Influence of Campylobacter **jejuni cecal colonization on** immunoglobulin **response in** chickens .

Myszewski M A; Stern N J

Department of Medical Microbiology, University of Georgia, Athens 30606.

Avian diseases (UNITED STATES) Jul-Sep 1990, 34 (3) p588-94, ISSN 0005-2086 Journal Code: 0370617

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

The **immunoglobulin** response of **chickens** to colonization by **Campylobacter** jejuni isolates B-540 and Clin-1 was monitored. **Chicken** humoral **IgG** and biliary secretory **IgA** (sIgA) responses were assessed by enzyme-linked immunosorbent assay (ELISA). Samples were taken from 128 C. jejuni-colonized chickens and 104 uncolonized chickens housed in a controlled environment. An indirect ELISA was performed using the homologous isolate of C. jejuni as the capture antigen and was developed with the specific goat anti- **chicken** **IgG** or **IgA** alkaline phosphatase conjugates. The ELISA absorbance values of the test samples at 405 nm (serum diluted 1:32 and bile diluted 1:10) were normalized in direct proportion to standard sera and bile sample values. In the colonized **chickens** , humoral **IgG** activities were highest at hatch, dropped to their lowest level after 2 weeks, and increased by 8 weeks to levels similar to those detected at hatch. The sIgA activity was lowest at hatch and increased by 4 weeks in colonized chickens while remaining lower in the control chickens. Chickens colonized with isolate B-540 showed a primary sIgA response during the first 4 weeks and reached a plateau over the final 4 weeks. In spite of these limited humoral and secretory **immunoglobulin** responses, once the **chicken** ceca was colonized by C. jejuni, the organism persisted throughout the 8-week experiment.

Tags: Animal

Descriptors: **Campylobacter** jejuni--immunology--IM; *Cecum--microbiology --MI; * **Chickens** --immunology--IM; * **Immunoglobulin** A, Secretory --biosynthesis--BI; *Immunoglobulin G--biosynthesis--BI; Bile--immunology --IM; **Campylobacter** Infections--immunology--IM; **Campylobacter** Infections--veterinary--VE; **Campylobacter** jejuni--growth and development --GD; Carrier State--immunology--IM; Carrier State--veterinary--VE; Enzyme-Linked Immunosorbent Assay; Poultry Diseases--immunology--IM

CAS Registry No.: 0 (Immunoglobulin A, Secretory); 0 (Immunoglobulin G)

Record Date Created: 19901207

Record Date Completed: 19901207

08383145 95071121 PMID: 7526839

Isotype, specificity, and kinetics of systemic and mucosal antibodies to Campylobacter jejuni antigens, including flagellin, during experimental oral infections of chickens.

Cawthraw S; Ayling R; Nuijten P; Wassenaar T; Newell D G

Central Veterinary Laboratory (Weybridge), New Haw, Addlestone, Surrey, United Kingdom.

Avian diseases (UNITED STATES) Apr-Jun 1994, 38 (2) p341-9, ISSN 0005-2086 Journal Code: 0370617

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

The **immune** response of **chickens** to **Campylobacter** jejuni infection was studied as a step in the search for vaccine candidates. One-day-old chicks orally challenged with C. jejuni strain 81116 showed significant increases in specific IgG, IgA, and IgM circulating **antibodies** , as detected by enzyme-linked immunosorbent assay (ELISA). These levels peaked at 9, 5, and 7 weeks postinfection, respectively. Maternal IgG **antibodies** were also detected over the first 2 weeks. Specific mucosal IgG and IgA **antibody** levels also increased significantly. All of the **birds** demonstrated a major response to the 62- **kDa** flagellin protein by Western blotting techniques. The immunodominance of flagellin was confirmed by ELISA using an antigen preparation from an **aflagellate** mutant. When overlapping recombinant polypeptide fragments of flagellin were used, epitopes detected by **chicken** **antibodies** were observed in region IV, between residues 95-340 of the protein. Thus flagellin may be suitable candidate for a vaccine, although its role in protection must first be established.

Tags: Animal; Support, Non-U.S. Gov't

Descriptors: Antibodies, Bacterial--biosynthesis--BI; *Antigens, Bacterial--immunology--IM; * **Campylobacter** Infections--immunology--IM; * **Campylobacter** jejuni--immunology--IM; *Flagellin--immunology--IM; *Immunoglobulin G--biosynthesis--BI; *Immunoglobulin Isotypes--biosynthesis --BI; *Intestinal Mucosa--immunology--IM; Antibodies, Bacterial--blood--BL; Antibodies, Bacterial--classification--CL; Antibody Specificity; Blotting, Western; Chickens; Enzyme-Linked Immunosorbent Assay; Epitopes--analysis --AN; Immunoglobulin G--blood--BL; Immunoglobulin G--classification--CL; Immunoglobulin Isotypes--classification--CL

CAS Registry No.: 0 (Antibodies, Bacterial); 0 (Antigens, Bacterial); 0 (Epitopes); 0 (Immunoglobulin G); 0 (Immunoglobulin Isotypes); 12777-81-0 (Flagellin)

Record Date Created: 19941129

Record Date Completed: 19941129

11732157 99169031 PMID: 10069862

Apoptotic ffect of outer-membrane proteins from Campylobacter **jejuni on chicken lymphocytes.**

Zhu J; Meinersmann R J; Hiett K L; Evans D L

Poultry Microbiological Safety Research Unit, Russell Agricultural Research Center, U.S. Department of Agriculture, Agricultural Research Service, Athens, GA 30604.

Current microbiology (UNITED STATES) Apr 1999, 38 (4) p244-9, ISSN 0343-8651 Journal Code: 7808448

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS; AIDS/HIV

Campylobacter jejuni is a significant cause of food-borne diseases in humans. The bacterium is considered a commensal organism in **chickens** , and it can heavily colonize **chickens** without causing inflammation. Poultry may be the major reservoir for the human infection in developed countries. Here we show that an outer-membrane protein extract prepared from the bacteria caused apoptosis of **chicken** lymphocytes detected in vitro with the terminal deoxynucleotidyl transferase-mediated dUTP nick end-labeling assay that preferentially labels individual apoptotic cells. Blood- and spleen-lymphocytes from different-aged **chickens** displayed a significantly greater percentage of apoptotic cells after culture with the outer-membrane proteins from C. jejuni than controls treated with phosphate-buffered saline, **chicken** ovalbumin, or outer-membrane proteins prepared from E. coli strain BL21. The C. jejuni extract also produced apoptosis of **chicken** lymphoblastoid tumor cell lines. Apoptosis was blocked by pretreating the extract with proteinase **K** or **antiserum** against outer-membrane proteins. The results suggest that C. jejuni may be capable of achieving **immune** avoidance in **chickens** by causing apoptosis of lymphocytes.

Tags: Animal; Support, U.S. Gov't, Non-P.H.S.

Descriptors: Apoptosis; *Bacterial Outer Membrane Proteins--pharmacology --PD; *CD4-Positive T-Lymphocytes--drug effects--DE; *CD8-Positive T-Lymphocytes--drug effects--DE; * **Campylobacter** jejuni--chemistry--CH; Age Factors; Bacterial Outer Membrane Proteins--drug effects--DE; **Campylobacter** jejuni--immunology--IM; Chickens; Endopeptidase K --pharmacology--PD; Escherichia coli--chemistry--CH; Ovalbumin --pharmacology--PD; Specific Pathogen-Free Organisms; Tumor Cells, Cultured

CAS Registry No.: 0 (Bacterial Outer Membrane Proteins); 9006-59-1 (Ovalbumin)

Enzyme No.: EC 3.4.21.64 (Endopeptidase K)

Record Date Created: 19990503

Record Date Completed: 19990503

10010 Comparative Biochemistry, General
10062 Biochemical Studies-Nucleic Acids, Purines and Pyrimidines
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
10506 Biophysics-Molecular Properties and Macromolecules
10508 Biophysics-Membrane Phenomena
12504 Pathology, General and Miscellaneous-Diagnostic
15002 Blood, Blood-Forming Organs and Body Fluids-Blood and Lymph Studies
34502 Immunology and Immunochemistry-General; Methods
36002 Medical and Clinical Microbiology-Bacteriology
38006 Veterinary Science-Microbiology
10066 Biochemical Studies-Lipids
10068 Biochemical Studies-Carbohydrates
36504 Medical and Clinical Microbiology-Serodiagnosis
BIOSYSTEMATIC CODES:
06210 Aerobic Helical or Vibrioid Gram-Negatives (1992-)
06703 Pasteurellaceae (1992-)
85536 Galliformes
85570 Trogoniformes
85715 Bovidae
85765 Canidae
86215 Hominidae

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09363587 BIOSIS NO.: 199497371957
Isotype, specificity, and kinetics of systemic and mucosal antibodies to Campylobacter **jejuni antigens, including flagellin, during experimental oral infections of chickens.**
AUTHOR: Cawthraw S; Ayling R; Nuijten P; Wassenaar T; Newell D G(a)
AUTHOR ADDRESS: (a)Central Vet. Lab., New Haw, Addlestone, Surrey KT15 3NB **UK
JOURNAL: Avian Diseases 38 (2):p341-349 1994
ISSN: 0005-2086
DOCUMENT TYPE: Article
RECORD TYPE: Abstract
LANGUAGE: English
SUMMARY LANGUAGE: English; Spanish

ABSTRACT: The **immune** response of **chickens** to **Campylobacter** jejuni infection was studied as a step in the search for vaccine candidates. One-day-old chicks orally challenged with C. jejuni strain 81116 showed significant increases in specific IgG, IgA, and IgM circulating **antibodies** , as detected by enzyme-linked immunosorbent assay (ELISA).These levels peaked at 9, 5, and 7 weeks postinfection, respectively. Maternal IgG **antibodies** were also detected over the first 2 weeks. Specific mucosal IgG and IgA **antibody** levels also increased significantly. All of the **birds** demonstrated a major response to the 62- **kDa** flagellin protein by Western blotting techniques. The immunodominance of flagellin was confirmed by ELISA using an antigen preparation from an **aflagellate** mutant. When overlapping recombinant polypeptide fragments of flagellin were used, epitopes detected by **chicken antibodies** were observed in region IV, between residues 95-340 of the protein. Thus flagellin may be a suitable candidate for a vaccine, although its role in protection must first be established.

DESCRIPTORS:
MAJOR CONCEPTS: Dental and Oral System (Ingestion and Assimilation); Immune System (Chemical Coordination and Homeostasis); Infection; Pathology; Veterinary Medicine (Medical Sciences)
BIOSYSTEMATIC NAMES: Aerobic Helical or Vibrioid Gram-Negatives--Eubacteria, Bacteria; Galliformes--Aves, Vertebrata, Chordata, Animalia
ORGANISMS: aerobic helical or vibrioid gram-negative bacteria (Aerobic Helical or Vibrioid Gram-Negatives); **Campylobacter** jejuni (Aerobic Helical or Vibrioid Gram-Negatives); Galliformes (Galliformes
BIOSYSTEMATIC CLASSIFICATION (SUPER TAXA): animals; bacteria; birds;

chordates; eubacteria; microorganisms; nonhuman vertebrates; vertebrates
MISCELLANEOUS TERMS: PATHOGENICITY; VACCINATION
CONCEPT CODES:
12512 Pathology, General and Miscellaneous-Therapy (1971-)
19006 Dental and Oral Biology-Pathology
34504 Immunology and Immunochemistry-Bacterial, Viral and Fungal
36002 Medical and Clinical Microbiology-Bacteriology
38004 Veterinary Science-Pathology
38006 Veterinary Science-Microbiology
10064 Biochemical Studies-Proteins, Peptides and Amino Acids
10068 Biochemical Studies-Carbohydrates
BIOSYSTEMATIC CODES:
06210 Aerobic Helical or Vibrioid Gram-Negatives (1992-)
85536 Galliformes

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Isotype, specificity, and kinetics of systemic and mucosal antibodies to Campylobacter **jejuni antigens, including flagellin, during experimental oral infections of chickens**
Cawthraw, S. Ayling, R.; Nuijten, P.; Wassenaar, T.; Newell, D.G.
Kennett Square, Pa. : American Association of Avian Pathologists Inc.
Avian diseases. Apr/June 1994. v. 38 (2) p. 341-349.
ISSN: 0005-2086 CODEN: AVDIAI
DNAL CALL NO: 41.8 Av5
Language: English Summary Language: Spanish
Includes references
Place of Publication: Pennsylvania
Subfile: IND; OTHER US (NOT EXP STN, EXT, USDA; SINCE 12/76);
Document Type: Article
The **immune** response of **chickens** to **Campylobacter** jejuni infection was studied as a step in the search for vaccine candidates. One-day-old chicks orally challenged with C. jejuni strain 81116 showed significant increases in specific IgG, IgA, and IgM circulating **antibodies** , as detected by enzyme-linked immunosorbent assay (ELISA). These levels peaked at 9, 5, and 7 weeks postinfection, respectively. Maternal IgG **antibodies** were also detected over the first 2 weeks. Specific mucosal IgG and IgA **antibody** levels also increased significantly. All of the **birds** demonstrated a major response to the 62- **kDa** flagellin protein by Western blotting techniques. The immunodominance of flagellin was confirmed by ELISA using an antigen preparation from an **aflagellate** mutant. When overlapping recombinant polypeptide fragments of flagellin were used, epitopes detected by **chicken antibodies** were observed in region IV, between residues 95-340 of the protein. Thus flagellin may be a suitable candidate for a vaccine, although its role in protection must first be established.
DESCRIPTORS: chickens; **campylobacter** jejuni; experimental infections; antibody formation; iga; igg; igm; maternal antibodies; flagella; bacterial antigens; antigenic determinants; isotypes;
Section Headings: L832 ANIMAL DISEASES-BACTERIAL; L810 VETERINARY PHARMACOLOGY AND IMMUNE THERAPEUTIC AGENTS
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Biochemical and antigenic properties of the Campylobacter flagellar hook protein

ME Power, RA Alm and TJ Trust

Department of Biochemistry and Microbiology, University of Victoria, British Columbia, Canada.

The flagellar filament-hook complex was removed from Campylobacter cells by shearing and was purified by differential solubilization and ultracentrifugation at pH 11 followed by cesium chloride buoyant density ultracentrifugation. Flagellar filaments were then dissociated in 0.2 M glycine-HCl (pH 2.2), and purified hooks were collected by ultracentrifugation. The hooks (105 by 24 nm) each displayed a conical protrusion at the proximal end, a concave cavity at the distal end, and helically arranged subunits. The apparent subunit molecular weight of the hook protein of seven of the eight Campylobacter strains studied was 92,500, while that of the other was 94,000. N-terminal amino acid analysis of the hook protein of two strains of Campylobacter coli and one strain of Campylobacter jejuni demonstrated that the first 15 residues were identical. Amino acid composition analysis showed that the Campylobacter hook protein contained 35.7% hydrophobic and 9.5% basic residues. Isoelectric focusing determined that the hook protein was acidic, with a pI of 4.9. Comparisons with the Salmonella and Caulobacter hook protein compositions

IAI Infection and Immunity

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Heat shock- and alkaline pH-induced proteins of Campylobacter jejuni: characterization and immunological properties

YL Wu, LH Lee, DM Rollins and WM Ching

Naval Medical Research Institute, Bethesda, Maryland 20889-5607.

The protein response to physiological stress was characterized in Campylobacter jejuni 81176 after exposure to heat and pH shock and following periods of recovery. Immunoreactivities of major stress- related proteins were determined with anti-Campylobacter immune rabbit serum and intestinal lavage fluid. Distinct proteins with molecular masses ranging from 10 to 120 kDa were induced and/or released by selective heat or pH treatments. The most notable responses were those of two proteins with apparent molecular masses of 45 and 64 kDa that were induced and two other proteins of 10 and 12 kDa that were released by selective heat shock, alkaline pH treatment, or both. On the basis of N-terminal sequence analysis and immunological cross-reactivity data, the 64- and 10-kDa proteins were the C. jejuni homologs of Escherichia coli GroEL and GroES proteins, respectively. Enhanced chemiluminescence Western blotting (immunoblotting) revealed that all four proteins were among the major protein antigens recognized by anti-

Entry name	**Q9R4E6**
Primary accession number	**Q9R4E6**
Secondary accession numbers	None
Entered in TrEMBL in	Release 13, May 2000
Sequence was last modified in	Release 13, May 2000
Annotations were last modified in	Release 25, September 2003

Name and origin of the protein

Protein name	**groEL-like stress protein 62 kDa subunit [Fragment]**
Synonyms	None
Gene name	None
From	Campylobacter jejuni [TaxID: 197]
Taxonomy	Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales; Campylobacteraceae; Campylobacter.

References

[1] SEQUENCE.
MEDLINE=96123358; PubMed=8577276; [NCBI, ExPASy, EBI, Israel, Japan]
Takata T., Wai S.N., Takade A., Sawae Y., Ono J., Amako K.;
"The purification of a GroEL-like stress protein from aerobically adapted Campylobacter jejuni.";
Microbiol. Immunol. 39:639-645(1995).

Comments

None

Cross-references

0318986 96121222 PMID: 8576327

Identification and characterization of an immunogenic outer membrane protein of Campylobacter **jejuni.**

Burnens A; Stucki U; Nicolet J; Frey J

Institute for Veterinary Bacteriology, University of Berne, Switzerland.

Journal of clinical microbiology (UNITED STATES) Nov 1995, 33 (11) p2826-32, ISSN 0095-1137 Journal Code: 7505564

Document type: Journal Article

Languages: ENGLISH

Main Citation Owner: NLM

Record type: Completed

Subfile: INDEX MEDICUS

We cloned and expressed in Escherichia coli a gene encoding an 18- **kDa** outer membrane protein (Omp18) from **Campylobacter** jejuni ATCC 29428. The nucleotide sequence of the gene encoding Omp18 was determined, and an open reading frame of 165 amino acids was revealed. The amino acid sequence had the typical features of a leader sequence and a signal peptidase II cleavage site at the N-terminal part of Omp18. Moreover, the sequence had a high degree of similarity to the peptidoglycan-associated outer membrane lipoprotein P6 of Haemophilus influenzae and the peptidoglycan-associated lipoprotein PAL of E. coli. Southern blot analysis in which the cloned gene was used as a probe revealed genes similar to that encoding Omp18 in all species of the thermophilic group of **campylobacters** as well as **Campylobacter** sputorum. All **campylobacters** tested expressed a protein with a molecular mass identical to that of Omp18. The protein reacted immunologically with **polyclonal antibodies** directed against Omp18 from C. jejuni. PCR amplification of the gene encoding Omp18 with specific primers and subsequent restriction enzyme analysis of the amplified DNA fragments showed that the gene for Omp18 is highly conserved in C. jejuni strains isolated from humans, dogs, cats, calves, and **chickens** but is different in other **Campylobacter** species. In order to obtain pure recombinant Omp18 protein for serological assays, the cloned gene for Omp18 was genetically modified by replacing the signal sequence with a DNA segment encoding six adjacent histidine residues. Expression of this construct in E. coli allowed purification of the modified protein (Omp18-6xHis) by metal chelation chromatography. Sera from patients with past C. jejuni infection reacted positively with Omp18-6xHis, while sera from healthy blood donors showed no reaction with this antigen. Omp18, which is an outer membrane protein belonging to the family of PALs is well conserved in C. jejuni and is highly immunogenic. It is therefore a good candidate as an antigen for the serological diagnosis of past C. jejuni infections.

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Entry information

Entry name	CH60_CAMJE
Primary accession number	O69289
Secondary accession number	Q9PN75
Entered in Swiss-Prot in	Release 39, May 2000
Sequence was last modified in	Release 40, October 2001
Annotations were last modified in	Release 41, February 2003
Name and origin of the protein	
Protein name	**60 kDa chaperonin**
Synonyms	**Protein Cpn60** **groEL protein**
Gene name	**GROL** or **GROEL** or **MOPA** or **CJ1221**
From	Campylobacter jejuni [TaxID: 197]
Taxonomy	Bacteria; Proteobacteria; Epsilonproteobacteria; Campylobacterales; Campylobacteraceae; Campylobacter.
References	

[1]	SEQUENCE FROM NUCLEIC ACID. MEDLINE=99140140; PubMed=10206714; [NCBI, ExPASy, EBI, Israel, Japan] Thies F.L., Weishaupt A., Karch H., Hartung H.P., Giegerich G.; "Cloning, sequencing and molecular analysis of the Campylobacter jejuni groESL bicistronic operon."; Microbiology 145:89-98(1999).
[2]	SEQUENCE FROM NUCLEIC ACID. **STRAIN**=ATCC 43429, ATCC 43432, ATCC 43438, and ATCC 43456; Cunningham A., Taboada E., Nash J.H., Wakarchuk W.W., Gilbert M.; "Sequencing of the cpn60 gene from various Campylobacter jejuni isolates."; Submitted (DEC-2001) to the EMBL/GenBank/DDBJ databases.
[3]	SEQUENCE FROM NUCLEIC ACID. **STRAIN**=NCTC 11168; MEDLINE=20150912; PubMed=10688204; [NCBI, ExPASy, EBI, Israel, Japan] Parkhill J., Wren B.W., Mungall K., Ketley J.M., Churcher C., Basham D., Chillingworth T., Davies R.M., Feltwell T., Holroyd S., Jagels K., Karlyshev A.V., Moule S., Pallen M.J., Penn C.W., Quail M.A., Rajandream M.A., Rutherford K.M., van Vliet A.H.M., Whitehead S., Barrell B.G.; "The genome sequence of the food-borne pathogen Campylobacter jejuni reveals hypervariable sequences."; Nature 403:665-668(2000).

Comments

FUNCTION: Prevents misfolding and promotes the refolding and proper assembly of unfolded polypeptides generated under stress conditions *(By similarity)*.

SUBUNIT: Oligomer of 14 subunits composed of two stacked rings of 7 subunits *(By similarity)*.

SUBCELLULAR LOCATION: Cytoplasmic *(By similarity)*.

SIMILARITY: Belongs to the chaperonin (HSP60) family.

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Cross-references

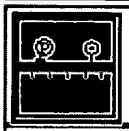
EMBL	Y13334; CAA73778.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AF461064; AAL76936.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AF461534; AAL67841.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AF461535; AAL67842.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AF461537; AAL67844.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence] AL139077; CAB73475.1; -. [EMBL / GenBank / DDBJ] [CoDingSequence]
PIR	G81328; G81328.
HSSP	P06139; 1GRL. [HSSP ENTRY / SWISS-3DIMAGE / PDB]
CMR	O69289; CJ1221.
HAMAP	MF_00600; -; 1. PBIL [Family / Alignment / Tree]
InterPro	IPR001844; Chaprnin_Cpn60. IPR002423; Cpn60/TCP-1. Graphical view of domain structure.
Pfam	PF00118; cpn60_TCP1; 1.
PRINTS	PR00298; CHAPERONIN60. PR00304; TCOMPLEXTCP1.
PROSITE	PS00296; CHAPERONINS_CPN60; 1.
ProDom	[Domain structure / List of seq. sharing at least 1 domain]
HOBACGEN	[Family / Alignment / Tree]
BLOCKS	O69289.
ProtoNet	O69289.
ProtoMap	O69289.

PRESAGE	O69289.
DIP	O69289.
ModBase	O69289.
SWISS-2DPAGE	Get region on 2D PAGE.

Keywords

Chaperone; **ATP-binding**; **Complete proteome**.

Features



Feature table viewer

Key	From	To	Length	Description
CONFLICT	179	179		A -> P (IN REF. 1).
CONFLICT	383	383		A -> T (IN REF. 1).

Sequence information

Length: **545 AA**	Molecular weight: **57970 Da**	CRC64: **4DA80BC64330C41E** [This is a checksum on the sequence]

```
        10         20         30         40         50         60
        |          |          |          |          |          |
MAKEIIFSDE ARNKLYEGVK KLNDAVKVTM GPRGRNVLIQ KSFGAPSITK DGVSVAKEVE

        70         80         90        100        110        120
        |          |          |          |          |          |
LKDSLENMGA SLVREVASKT ADQAGDGTTT ATVLAHAIFK EGLRNITAGA NPIEVKRGMD

       130        140        150        160        170        180
        |          |          |          |          |          |
KACEAIVAEL KKLSREVKDK KEIAQVATIS ANSDEKIGNL IADAMEKVGK DGVITVEEAK

       190        200        210        220        230        240
        |          |          |          |          |          |
SINDELNVVE GMQFDRGYLS PYFITNAEKM TVELSSPYIL LFDKKITNLK DLLPVLEQIQ

       250        260        270        280        290        300
        |          |          |          |          |          |
KTGKPLLIIA EDIEGEALAT LVVNKLRGVL NISAVKAPGF GDRRKAMLED IAILTGGEVI

       310        320        330        340        350        360
        |          |          |          |          |          |
SEELGRTLES ATIQDLGQAS SVIIDKDNTT IVNGAGEKAN IDARVNQIKA QIAETTSDYD

       370        380        390        400        410        420
        |          |          |          |          |          |
REKLQERLAK LSGGVAVIKV GAATETEMKE KKDRVDDALS ATKAAVEEGI VIGGGAALIK

       430        440        450        460        470        480
        |          |          |          |          |          |
AKAKIKLDLQ GDEAIGAAIV ERALRAPLRQ IAENAGFDAG VVVNSVENAK DENTGFDAAK

       490        500        510        520        530        540
        |          |          |          |          |          |
GEYVNMLESG IIDPVKVERV ALLNAVSVAS MLLTTEATIS EIKEDKPTMP DMSGMGGMGG


MGGMM
```

O69289 in FASTA format

View entry in original Swiss-Prot format
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BLAST — BLAST submission on ExPASy/SIB or at NCBI (USA)

Sequence analysis tools: ProtParam, ProtScale, Compute pI/Mw, PeptideMass, PeptideCutter, Dotlet (Java)

ScanProsite, MotifScan

Search the SWISS-MODEL Repository

The Korean ExPASy site, **kr.expasy.org**, is temporarily not available.